

CLAIMS

WHAT IS CLAIMED IS:

1. A method of measuring performance of streaming media over a network,
the method comprising:

5 connecting a data acquisition agent to the network;

 sending a request for streaming media from the data acquisition agent to a
media source connected to the network;

 receiving streaming media in response to the request for media at the data
acquisition agent;

10 collecting performance measurements for the streaming media; and

 sending the performance measurements to a storage device.

2. The method of claim 1 wherein receiving streaming media comprises
receiving streaming audio.

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3. The method of claim 1 wherein receiving streaming media comprises receiving streaming video.

4. The method of claim 1 wherein receiving streaming media comprises receiving streaming audio and video.

5. The method of claim 1 further comprising sending a list of target media to the data acquisition agent.

6. The method of claim 5 further comprising sending a schedule for requesting the target media.

7. The method of claim 1 wherein collecting performance measurements comprises collecting initial connection and redirection times.

8. The method of claim 1 wherein collecting performance measurements comprises collecting number of redirects.

9. The method of claim 1 wherein collecting performance measurements comprises collecting packet information.

10. The method of claim 1 wherein collecting performance measurements comprises collecting rebuffer information.

11. The method of claim 1 wherein collecting performance measurements comprises collecting frame information.

12. The method of claim 1 wherein collecting performance measurements comprises collecting bandwidth information.

13. The method of claim 1 wherein collecting performance measurements comprises identifying the codec used to encode a clip.

14. The method of claim 1 wherein collecting performance measurements comprises identifying errors

15. The method of claim 1 wherein the network is the Internet.

16. The method of claim 15 wherein the media source is a Web server.

5 17. The method of claim 1 wherein connecting a data acquisition agent to the network comprises connecting a plurality of data acquisition agents to the network at a plurality of locations.

10 18. The method of claim 17 wherein each of the data acquisition agents include an internal clock coordinated with the other data acquisition agent clocks.

 19. The method of claim 1 further comprising displaying the performance measurements on a Web site.

15 20. The method of claim 1 further comprising determining a stream quality rating based on the collected performance measurements.

21. The method of claim 20 wherein the stream quality rating is based on a startup score, audio score, and video score.

22. The method of claim 21 wherein the video and audio scores are based on rendering and encoding scores.

23. The method of claim 22 wherein the rendering scores are based on relative packets and bandwidth.

24. The method of claim 22 wherein the encoding scores are based on bandwidth data.

25. The method of claim 1 wherein collecting performance measurements comprises collecting measurements for a predetermined period of time.

26. The method of claim 1 wherein collecting performance measurements comprises collecting measurements at predetermined intervals.

27. The method of claim 1 wherein collecting performance measurements comprises collecting measurements at specified times.

28. A computer program product for measuring streaming media over a network, the product comprising:

computer code that connects a data acquisition agent to the network;

computer code that sends a request for streaming media from the data acquisition agent to a media source connected to the network;

computer code that receives streaming media in response to the request for media at the data acquisition agent;

computer code that collects performance measurements for the streaming media; and

a computer readable medium that stores said computer codes.

29. The computer product of claim 28 wherein the computer readable medium is selected from the group consisting of CD-ROM, floppy disk, tape, flash memory, system memory, hard drive, and a data signal embodied in a carrier wave.

30. A system for measuring performance of streaming media sent from a server over a network, the system comprising a data acquisition agent connected to the network and operable to send a request for streaming media to the server, the agent being configured to receive the streaming media, collect performance measurements, and send the performance measurements to a storage device.

31. The system of claim 30 wherein the data acquisition agent includes a media player.

32. The system of claim 30 further comprising a preference delivery system operable to send to the agent a preference file containing a list of target sites to be measured and a schedule for measuring performance of the sites.

33. The system of claim 32 wherein the agent further comprises a dispatcher operable to read the preference file and invoke a measurement application.

34. The system of claim 30 further comprising a data delivery system operable to receive data collected by the agent and store said data in a database.

35. The system of claim 30 wherein the performance measurements include a list of errors

36. The system of claim 30 wherein the performance measurements comprise initial connection and redirection times.

37. The system of claim 30 wherein the performance measurements comprise number of redirects.

38. The system of claim 30 wherein the performance measurements comprise packet information.

39. The system of claim 30 wherein the performance measurements comprise rebuffer information.

40. The system of claim 30 wherein the performance measurements comprise frame information.

5 41. The system of claim 30 wherein the performance measurements comprise bandwidth information.

42. The system of claim 30 wherein the performance measurements comprise the codec used to encode a clip.

10 43. The system of claim 30 wherein the network is the Internet.

44. The system of claim 43 wherein the server is a Web server.

15 45. The system of claim 30 further comprising a plurality of data acquisition agents located in different geographic locations.

46. The system of claim 30 further comprising a processor configured to determine a stream quality rating based on the collected performance measurements.

5 47. The system of claim 46 wherein the stream quality rating is based on a startup score, audio score, and video score.

48. The system of claim 47 wherein the video and audio scores are based on rendering and encoding scores.

10 49. The system of claim 48 wherein the rendering scores are based on relative packets and bandwidth.

15 50. The system of claim 48 wherein the encoding scores are based on bandwidth data.

51. The system of claim 30 wherein the agent is configured to at least temporarily store the collected performance measurements.

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